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The big chill — how did we do?

14 January 2010

Since mid-December we've seen some of the severest winter weather in the UK for decades. Cold air arrived from the east and north, with temperatures falling as low as -22 °C. This combined with weather fronts coming in off the North Sea to cause a series of snowfall events, as well as prolonged icy conditions.

During this time government organisations, businesses and the public have relied on the Met Office to provide accurate forecasts and weather warnings so they can plan for what's ahead. To give an example of the level of demand, we've had more than 135 million page views on our website since the cold spell began on 16 December.

Forecasting snow and accurately predicting where it will fall poses a tough challenge for forecasters. The sheer number of snowfall events over a prolonged period of severe weather created a very busy time for our weather experts.

To give an idea of how we've done over this time, here are a few examples of the weather warnings we put out and the subsequent weather that followed.

Weather warnings we put out, and the subsequent weather	
10 December 2009 Early advice was given of a change from the existing mild and wet conditions to wintry weather.	✓
17-18 December 2009 Severe Weather Warnings issued to emergency responders two to three days ahead of heavy snow event in east/south-east England — 20 cm of snow forecast in the relevant areas.	✓
21 December 2009 Severe Weather Warnings were issued for heavy snow (up to 10 cm) across central southern England — correct amounts forecast.	✓
23 December 2009 Attention turned from snow to ice in the run up to Christmas. Severe Weather Warnings were issued for widespread ice across south/south-west england — rain fell with temperatures of -3 °C, causing widespread ice as forecast.	✓
25-31 December 2009 Temporary respite across southern UK for Christmas/New Year period correctly predicted whilst warnings were issued for ice and heavy snow further north.	✓
5-6 January 2010 Exceptional snow warning put out for southern areas, with 40 cm predicted in places — confirmed reports of 30-40 cm of level snow from Berkshire and Hampshire.	✓
7-9 January 2010 Emphasis shifted to extreme temperatures on the following days, with temperatures predicted to be lower than -20 °C locally in Scotland and negative double figures locally in the south — the coldest temperatures of the winter were recorded, with -22.3 °C in the Scottish Highlands and parts of Oxfordshire recording a low of -18 °C.	✓
10 January 2010 Initial warnings for snow across England and Wales overplayed, but forecasts and communications were modified as the situation developed — some media criticism but praise received from local planners for providing useful updates.	✗
12-13 January 2010 Weather warnings issued for heavy snow across many parts of Britain including the south-west and Wales, where the heaviest snow fell, although more snow than expected fell in some parts of the south-east on Wednesday morning. This fell onto frozen ground leading to extremely difficult travel conditions.	✓

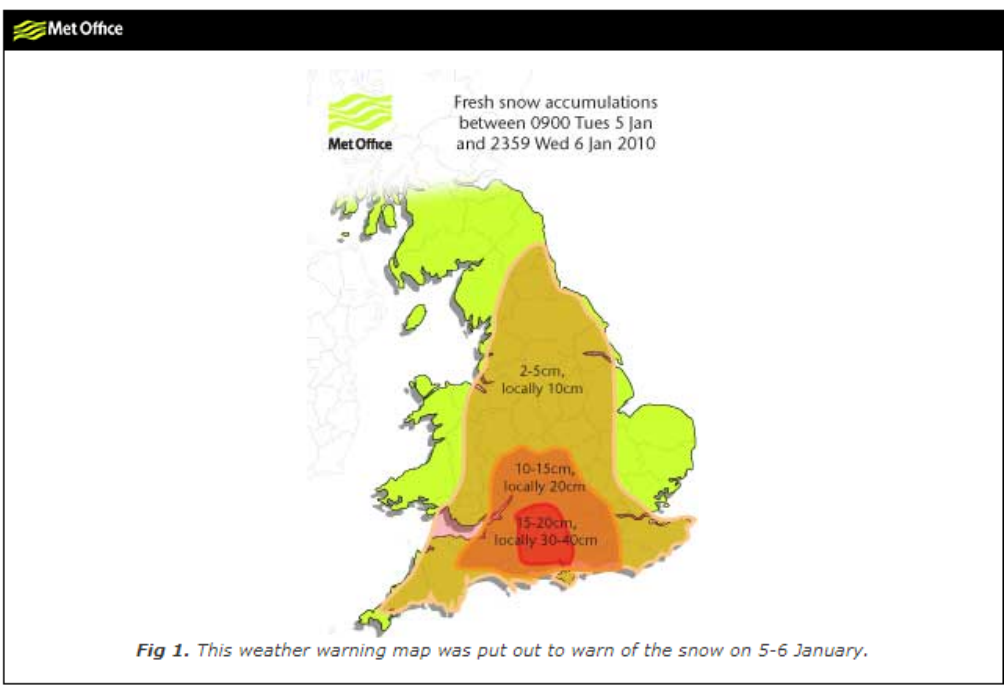

Fig 1. This weather warning map was put out to warn of the snow on 5-6 January.

While our seasonal forecast for a mild winter may have been wide of the mark, this shows that our forecasts for up to five days have been consistently accurate. Here are some examples of the feedback we've received from across our range of customers:

Steve Williams, Senior Manager Integrated Public Transport, Integrated Transport Service: "I just wanted to feed back to you how useful the bulletins are and they have certainly helped us in our operational planning over the past few days in that we can use what you tell us as a part of our risk assessment process. I am very impressed by the style of the bulletins, which are easy to understand for all of my staff, as well as being accurate."

John Gibbs, Contingency Planning Manager, EDF Energy Networks: "As usual they [PWS Advisor Updates] have been very valuable during the event so far and have given us some stability and consistency of forecast during the event that, as you know, we occasionally don't get from some of our other sources of weather information. As I've said before, they demonstrate that you know your target audience really well and focus on the things we want to know about.

"I should also praise the severe weather warning service as it has been very good for this event so far, and I think that the recent 'cancellation' for the heavy snowfall warning is a considerable improvement on previous events when we weren't advised of changes. It was very useful to get the cancellation when the circumstances changed, instead of just thinking that the timing had changed or it had moved slightly. It was very reassuring and allowed us to flex our plans!"

Paul Smith, Chief Executive, NPT & Swansea Councils: "This really is the best forecasting support I've ever seen."

Edmund King, President of the AA: "The Met Office had predicted when the snow was coming. Therefore, there was a window of opportunity for getting gritters out on these roads."

Cabinet Office spokesperson: "The Met Office is an integral part of the UK central government response to the current severe weather and we have been very grateful for the support and advice that has been provided."

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